

Abstract

Analyte Detection

[00100] A method of characterizing an analyte sample is provided that includes the steps of: (a) anchoring the analyte to a nucleic acid template of known sequence; (b) conducting a DNA polymerase reaction that includes the reaction of a template, a non-hydrolyzable primer, at least one terminal phosphate-labeled nucleotide, DNA polymerase, and an enzyme having 3' → 5' exonuclease activity which reaction results in the production of labeled polyphosphate; (c) permitting the labeled polyphosphate to react with a phosphatase to produce a detectable species characteristic of the sample; (d) detecting the detectable species. The method may include the step of characterizing the nucleic acid sample based on the detection. Also provided are methods of analyzing multiple analytes in a sample, and kits for characterizing analyte samples.